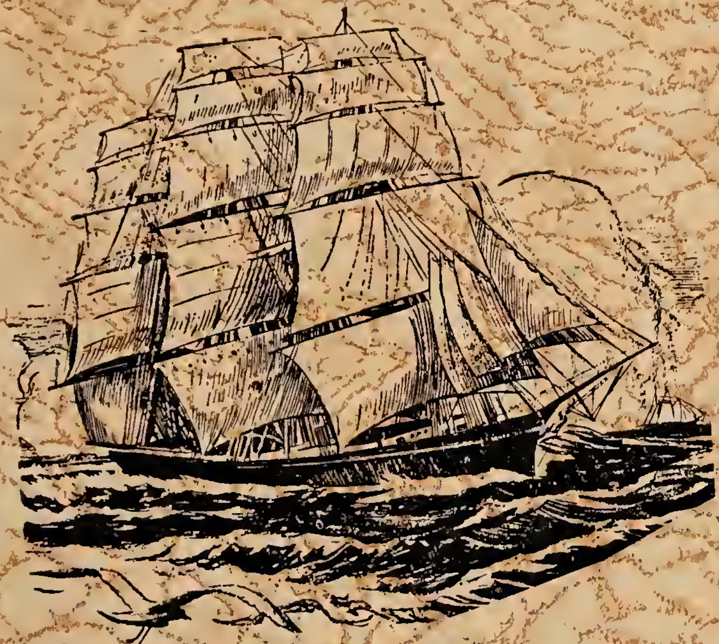
The Port of Astoria and Lower Columbia River



Issued by the Port of Astoria Commission
Astoria, Oregon, March 1927

THE PORT OF ASTORIA AND LOWER COLUMBIA RIVER

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A HANDBOOK OF SHIPPING INFORMATION ON THE PORT OF ASTORIA AND LOWER COLUMBIA RIVER DISTRICT.

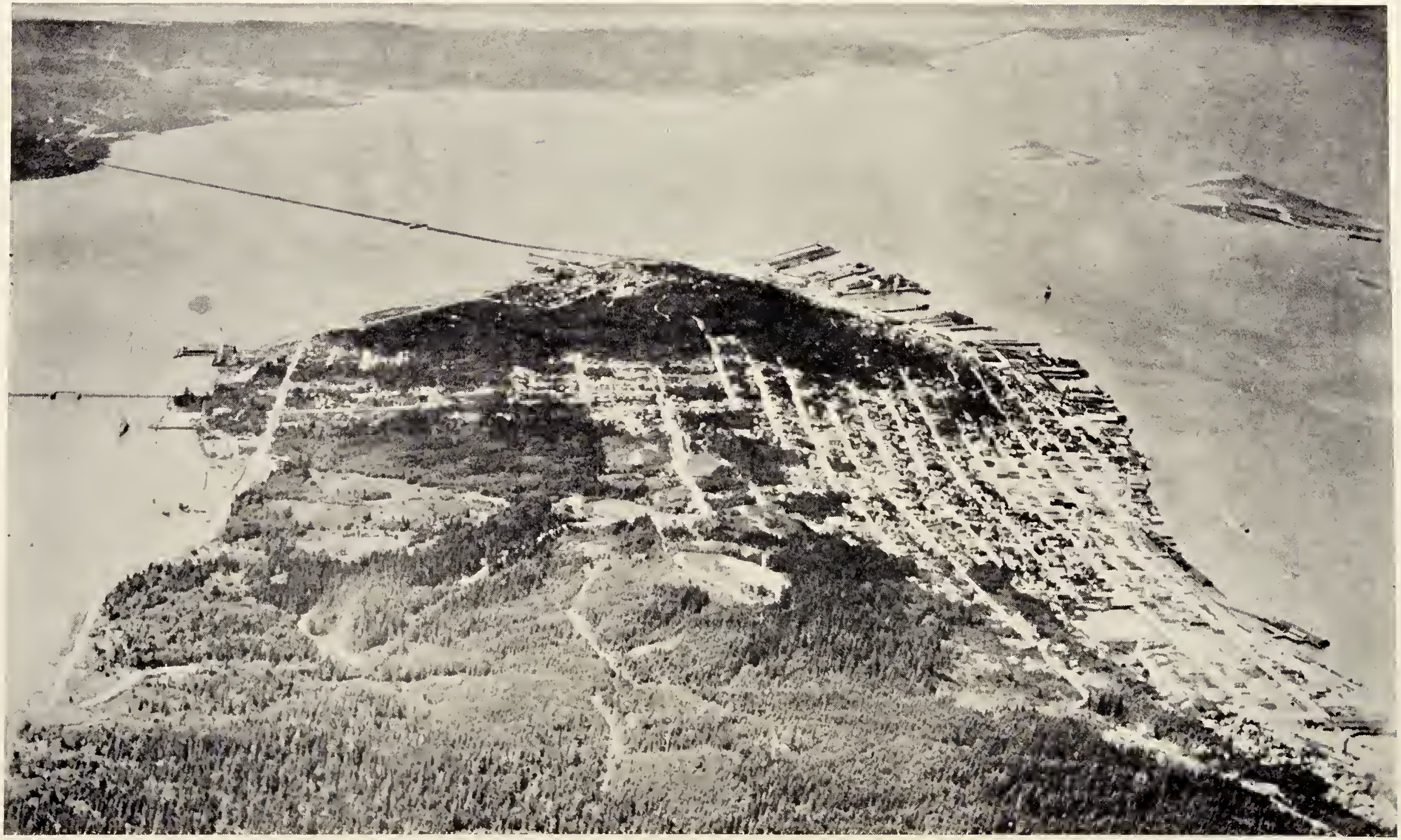
Information contained in this booklet has been prepared by the Port of Astoria from data supplied by various departments of the U. S. Government and other public and private sources. It is believed to be accurate for the date of issue, March 15, 1927. The Port of Astoria is not responsible for errors or omissions.

Mileage figures shown herein refer to statute miles and tonnage statistics are given in short tons.

The Port of Astoria welcomes inquiries requesting information on services, rates or other particulars relating to the Port of Astoria or the Lower Columbia River.

Issued by the Port of Astoria Commission, Astoria, Oregon, March 1927.

AIRPLANE VIEW OF ASTORIA AND LOWER COLUMBIA RIVER



(Photo by Brubaker Aerial Surveys)

Youngs Bay on left crossed by Roosevelt Highway bridge and S. P. & S. Ry. Co. bridge. Main ship channel of Columbia River on right. Mouth of the Columbia River in upper right corner. Pacific Ocean in background.

HISTORY

The known history of the Lower Columbia River and Astoria begins with the discovery and naming of the Columbia River by Captain Robert Gray on May 11, 1792.

A Model of the Ship COLUMBIA. first ship to enter Columbia River.

The Lewis and Clark expedition was the first exploring party to reach the mouth of the river by the overland route, arriving on November 15, 1805, and spending the winter of 1805-1806 near the present site of Astoria.

In 1811 the Pacific Fur Company made the first attempt at permanent settlement and named their trading post Astoria in honor of John Jacob Astor, principal stockholder of the company. They had expected to establish a chain of trading posts throughout the territory but the War of 1812 and consequent lack of government aid and support forced abandonment of the enterprise and the post was taken over by their British rivals, the Northwest Fur Company and renamed Fort George.

By the treaty following the war, the entire Northwest country was made subject to joint occupancy by England and the United States. The number of American permanent settlers increased so rapidly and the demand for a stable government became so insistent that in 1846 the long dispute over ownership was finally settled by fixing the 49th parallel as the boundary between the two countries.

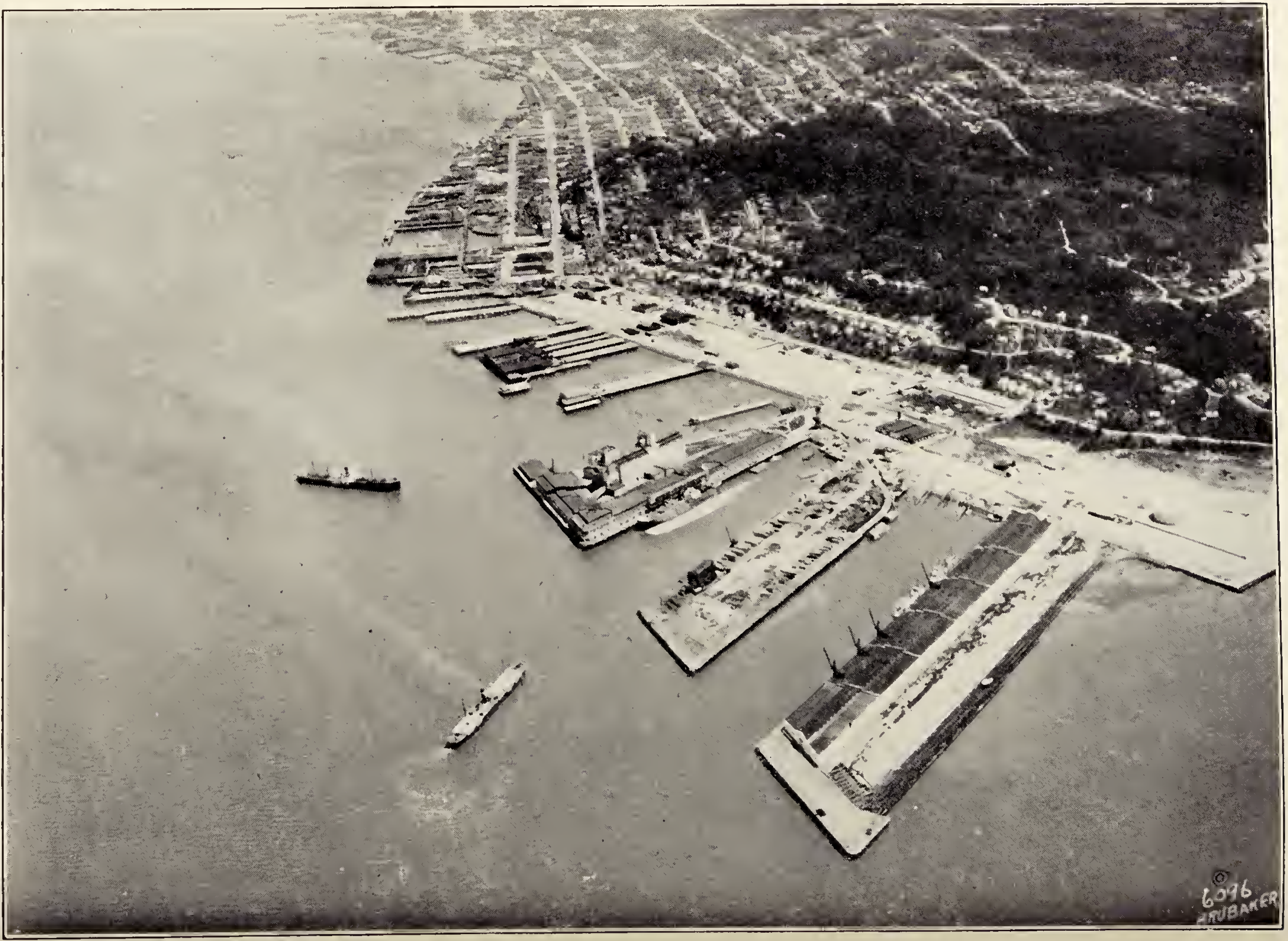
The Lower Columbia River area shared in the development which followed the establishment of American sovereignty. The fishing industry was one of the first to exploit the immense natural resources of the region, commercial packing being started in 1866. This is still one of the big industries of the state, employing several thousand people and producing a pack valued at about $6,000,000 annually. Logging and lumbering started on a small scale at an early date and have grown very rapidly in recent years as the United States has become more dependent on the Pacific Northwest for its lumber supply and as new foreign markets opened. Lumber and its products now form the basic cargo from the Northwest. These commodities of local origin, together with wheat from the Inland Empire and flour ground from that wheat, first attracted commercial shipping. The constantly increasing and more varied production, together with entrance and channel improvement, have been followed by a corresponding growth in shipping from the days of small sailing ships through the period of tramp steamship chartering to the present time when fast liner services by large modern steam and motor vessels carry most of the cargo.

The Port of Astoria was organized in 1910, commenced construction of facilities in 1914 and completed last major construction in 1922.

The City of Astoria is of greater commercial importance than indicated by its population as it is the trading, financial, shipping and commercial center of the Lower Columbia River district.

There are still great timber resources available for manufacturing the products of the forest. It is estimated that there are ten billion feet of merchantable timber

AIRPLANE VIEW OF PORT OF ASTORIA TERMINAL



(Photo by Brubaker Aerial Surveys)

in Clatsop County alone and in addition great stands in Southwestern Washington tributary to Astoria. Wood pulp and paper mill projects now under way will produce a more diversified output and eliminate the wastage of by-products. The annual fish pack is being increased by a system of artificial hatcheries. The agricultural possibilities of the surrounding country due to the mild equable climate and fertile soil are becoming better known and a large growth is being experienced in this line.

As a result of the industrial and agricultural development the volume of shipping is growing steadily, making the district of increasing interest to those interested in the various phases of transportation.

(Copyright by Prentiss)

Examples of the immense size of virgin timber in Clatsop County.

LOCATION

The City of Astoria is in latitude 46 degrees 11 minutes north, longitude 123 degrees 51 minutes west. It is located 14 miles from the entrance to the Columbia River, 108 miles by Willamette and Columbia Rivers from Portland, 640 miles north of San Francisco and 306 miles from Seattle by steamer routes.

The Port of Astoria District includes all of Clatsop County, in the extreme northwestern corner of the state, and on the Columbia River extends from the mouth of the river to Westport, about 44 miles. The north bank of the lower river is included in the Astoria Customs District and the shipping is tributary to Astoria.

CLIMATE

The climate is mild and equable, the mean temperature over a period of 40 years being 50.9 degrees F. The mean maximum for the same period is 57.9 degrees and mean minimum 45.2 degrees. The highest temperature recorded in this period was 97 degrees and lowest 10 degrees. There are many winter seasons with practically no freezing weather. The temperature seldom rises above 90 degrees or falls below 30 degrees. The annual average rainfall for a period of 70 years is 77 inches. The average number of days annually with more than .01 inch of rain is 192.

HARBOR ENTRANCE AND CHANNEL

The United States Government completed construction of the jetties at the mouth of the river in 1915. Since that time the action of the natural tidal and river currents has gradually increased the entrance depth and width until there is now an entrance channel of 47 feet depth for a width of 2500 feet and 40 to 46 feet depth over a width of 6500 feet at mean low water.

The present government project provides for a minimum channel depth of 30 feet and width of 300 feet at mean low tide between Portland and sea, but this depth and width are exceeded between Astoria and sea.

The harbor has an anchorage ground of about 12 square miles varying in depth from 24 to 70 feet. The harbor at Astoria is fresh water, free from ice and unaffected by river freshet conditions.

The average tidal range at Astoria is 7 feet 5 inches. About 6 hours time is required for the tide to pass from the Columbia River entrance to the mouth of the Willamette River. The tidal range decreases proportionately until it is about 1½ feet at the mouth of the Willamette River.

The prevailing winds in summer are from northwest and west and in winter usually from southwest or southeast with occasional changes to east.

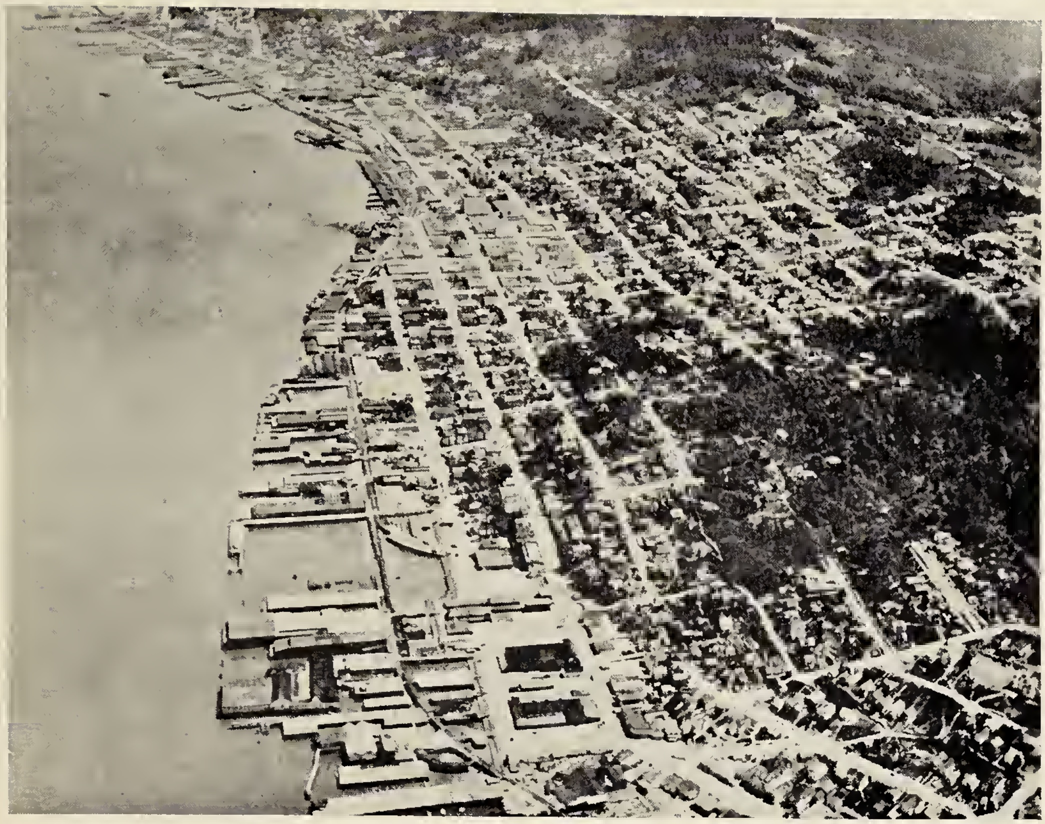
Fog is not a serious problem on the lower river, usually being of limited duration. Figures supplied by U. S. Lighthouse Service for year ending June 30, 1926, show fog hours at various Pacific Coast harbor entrances as follows:

Los Angeles Harbor Light Station	994 hours
Lightship No. 70, entrance to San Francisco Bay	1097 hours
Bonita Point Light Station	1045 hours
Columbia River Lightship	449 hours
Desdemona Light, inside Columbia River	161 hours
Umatilla Lightship, south of entrance to Straits of San Juan de Fuca	900 hours
Swiftsure Lightship, entrance to Straits of San Juan de Fuca	1351 hours

AIDS TO NAVIGATION

The Columbia River entrance and harbor at Astoria are very well equipped with navigation aids. There is a complete system of lighted ranges, lighted and unlighted buoys.

The Columbia River Lightship is stationed on the main channel range for entering the Columbia River, about 5½ miles southwest of the south jetty. It has a red hull with "Columbia" on each side and two masts. The lights, shown from each masthead are fixed white, 50 feet above water and visible for 15 miles. Fog signal is a steam whistle, blast 2 seconds, silent 18 seconds. Submarine bell signal 5 strokes every 30 seconds. Radio station WWBQ receives and transmits messages. Radio fog signals 3 dashes for 60 seconds, silent 30 seconds. Holding ground off lightship good.



(Photo by Brubaker Aerial Surveys)

Airplane View of Astoria Waterfront near Main Business District

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North Head Lighthouse, a white conical tower, is on the west point of North Head, on the north side of the river entrance, 194 feet above the water and visible 23 miles. Near the light is a U. S. Weather Bureau storm warning display station, with telegraph and telephone connections with Astoria and equipped with international code signals for reporting vessels and receiving messages. A U. S. Navy radio station, call NPE, is also near the lighthouse.

Desdemona Sands Lighthouse is located on a sandbar in the river, about 7 miles east from the entrance between the jetties. The light is fixed white, shown 48 feet above water from a white house on pile structure. Fog signal is a 3rd class reed horn sounding blast 2 seconds, silent 3 seconds, blast 2 seconds, silent 23 seconds.

The Naval Communication Service maintains two radio compass stations near the river entrance, keeping watch on 800 meter wave length, furnishing bearings in reply to conventional request signal "QTE"?

Station NZR-Fort Stevens, Ore. Lat. 46 degrees 11 minutes 32 seconds North, Long. 123 degrees 59 minutes 15 seconds West. Arc of calibration 175-335.

Station NZS-Klipsan Beach, Wash. Lat. 46 degrees 27 minutes 53 seconds North, Long. 124 degrees 3 minutes 16 seconds West. Arc of calibration 195-340.

U. S. Coast Guard Stations are located just inside the entrance on both sides of the river, Point Adams station at Fort Stevens, Ore. on the south side and Cape Disappointment station at Fort Canby, Wash. on the north side.

U. S. Weather Bureau storm warnings are displayed at North Head, Point Adams and Astoria. Weather reports are also transmitted by the Naval Radio Station at North Head (NPE).

PILOTAGE

Pilotage between sea and Astoria is not compulsory. Most coastwise and many intercoastal vessels do not engage pilots. Vessels desiring pilots should radio Columbia River Bar Pilots at Astoria, advising expected time of arrival at lightship. The pilot boat, a two masted power schooner, will usually be found cruising in vicinity of the lightship.

The bar pilotage ground extends from the uppermost wharf at Astoria or Knappton to at least 10 miles beyond outermost buoy and the river pilotage ground from lowermost wharf at Astoria to head of navigation on the Columbia or Willamette Rivers.

On vessels arriving from or proceeding upstream pilots are changed when off Astoria. Call for river or bar pilot at Astoria is one long blast of whistle followed by three short blasts. Bar and river pilots maintain offices on the waterfront at Astoria.

Present bar pilotage rates between sea and Astoria are $1.50 per foot maximum draft plus 1 cent per net registered ton. Charges for shifting on Astoria waterfront $10.00 per move. Moves from U. S. Quarantine anchorage grounds to Astoria docks $15.00. River pilotage rates between Astoria and Portland are $1.50 per foot maximum draft plus 1½ cents per net registered ton. Rates for pilotage between Astoria and points below Portland vary about proportionately.

U. S. CUSTOMS AND QUARANTINE REGULATIONS

National quarantine regulations on foreign shipping are enforced by the surgeon-in-charge of the U. S. Public Health Service at Astoria. Vessels subject to quarantine inspection proceed to the upper anchorage ground and are there boarded by the Public Health Service staff. Sulphur fumigation is effected while lying in the stream or at loading berth, and arrangements are now being made to provide cyanide fumigation at the Port Terminal. There is a fully equipped quarantine detention station on the North side of the river opposite Astoria.

For customs administration both sides of the Columbia river are in the Oregon collection district of which Portland is the headquarters. A deputy collector, shipping commissioner and several inspectors are stationed at Astoria.

Vessels arriving direct from foreign ports are boarded in the stream by a customs boarding officer. If intending to load or discharge at Astoria or any point below Portland, the master makes entry at Astoria. If proceeding direct to Portland formal entry may be made at that port. Vessels loading for foreign or intercoastal destinations at points between Portland and Astoria may clear from Portland or Astoria, but if finishing at Astoria or below, must clear from Astoria.

Foreign vessels arriving from a coastwise port not in the Oregon District are boarded and usually enter at Astoria if commencing work below Portland, but if proceeding to Portland direct are not boarded at Astoria and make entry at Portland. If arriving from another port in the Oregon District they are not boarded but must enter at either Portland or Astoria within 48 hours after arriving in the Columbia River.

Inspectors of the Bureau of Immigration and Federal Horticultural Board are stationed at Astoria and board and inspect vessels arriving from foreign ports.

TOWAGE

Towage is not necessary for vessels under power when berthing or leaving at Port of Astoria Terminal and most privately owned docks in the district but is necessary at some sawmill docks. There is a large traffic in coastwise and river towing of lografts, sand and gravel barges, etc. Much of the equipment is used in the business of the owners exclusively but tugs and barges of various sizes are available at all times from the concerns engaged in general towing and lighterage.

Following are principal companies engaged in general towing and class of tugs available:

Arrow Tug and Barge Company:	4 diesel tugs ranging in size from 11 to 33 gross tons and 50 to 240 H. P., including two ocean going tugs. Several barges from 100 to 400 tons capacity.
Anchor Towing Company:	2 sea going diesel tugs, one of 95 gross tons and 360 H. P., one of 17 tons and 150 H. P.
Bell and Butler:	One diesel tug, 14 tons, 65 H. P.
Brookfield Quarry and Towage Company:	One gas tug, 15 tons, 100 H. P.
Knappton Towboat Company:	Fleet of 13 steam and diesel tugs ranging in size from 11 to 99 gross tons and power from 110 to 250 H. P. Several barges from 100 to 400 tons capacity.
Parker Brothers:	One diesel tug 27 tons, 110 H. P. Barges also available.
Port of Portland:	Steam tug "Oneonta", 99 gross tons, 750 H. P. stationed at Portland, available for large outside towing jobs. Requires sufficient time to reach job from Portland.

DOCK FACILITIES

PORT OF ASTORIA TERMINAL

The Port of Astoria Terminal is located at Smith's Point in the western part of the city at the confluence of Youngs Bay and the Columbia River. The Piers extend to the main ship channel allowing vessels to berth or sail at any time without the use of towboats. A depth of 35 to 40 feet is maintained at all loading berths.

The terminal was constructed and is operated by the Port Commission as a public property open to all carriers and shippers. There are no port charges against the vessel loading or discharging cargo. Charges are assessed against the cargo. A berthage charge is made for a vessel lying idle. Port charges are absorbed by the carriers on cargo moving on through rail-and-water rates and on many routes port charges are partly absorbed by the steamship lines. Switching service to or from the Port Terminal and the Port's Belt Line Railroad is included in the line haul and local switching charges of the rail lines.

Principal dimensions and characteristics are as follows:

Pier One: 650x1,363 feet. Transit shed of hollow tile 92x1,363 feet. 1,725 feet berthing space. Track capacity 89 cars. Concrete bulk grain elevator 1,250,000 bushels capacity. Concrete flouring mill leased to Astoria Flouring Mills Company, 4,000 barrels daily capacity. Equipped with fixed belt conveyors inside warehouse and portable electrically operated conveyors for ship loading. Belt conveyor gallery on slip side for loading bulk grain. Electric pilers and all necessary cargo handling equipment. This pier used principally for grain, flour and feed.

Pier Two: 425x1,445 feet. Open pier used principally for handling lumber shipments and bulky commodities in open storage. 3,178 feet berthing space. Track capacity about 100 cars. Three locomotive cranes of 20, 35 and 50 tons capacity. Pipe lines from Pier to storage plants of Standard Oil Comapny, Shell Oil Company and General Petroleum Company. Standard Oil Company supplies fuel to ships at three loading berths on this pier.

Panoramic view Port of Astoria Terminal

Pier Three: 550x1,750 feet. Concrete transit shed 160x1,550 feet. 3,875 feet berthing space. Track capacity about 100 cars. Four electric traveling cranes operating on roof of transit shed and modern cargo handling equipment insure fast handling and prompt dispatch. Vacuum fumigating plant, complying with requirements of U. S. Horticultural Board located in warehouse. Type of construction and automatic sprinkler system permit very low fire insurance rates on goods stored in warehouse on this pier.

PRIVATE DOCKS

There are 32 privately owned piers and wharves on the Astoria waterfront. Most of these are used exclusively in the business of the owners and are not available for general use. Several privately owned docks near the main business district handle the local river and coastwise business. The principal privately owned general cargo docks are as follows:

Callender Dock:	Foot of 14th street. 200 feet frontage by 50 feet. One warehouse on dock. River traffic only. North Beach ferry landing at east end of dock.
Elmore Dock:	Foot of 3rd street. 350 feet frontage by 300 feet. Three warehouses on dock. Coastwise and river traffic.
Sanborn Dock:	Foot of 9th, 10th and 11th streets. 1,000 feet frontage by 100 feet. Three warehouses on dock. Open storage space and electric derrick for handling coal, sand and gravel. Used by coastwise and river lines.
Spokane, Portland & Seattle Ry. Co. Wharf:	Foot of 20th street. 361 feet frontage by 90 feet. Warehouse on wharf. Local and river traffic.
Union Pacific Dock:	Foot of 15th, 16th and 17th streets. 960 feet frontage by 60 feet. Warehouse on dock. Used by coastwise and river lines and river ferry service.

(Copyright by Prentiss)
Mill and Dock of Crossett-Western Lumber Co., Wauna, Ore.

(Photo by Brubaker Aerial Surveys)
Mill and Dock of Westport Lumber Co., Westport, Ore.

SAWMILL DOCKS

Most of the larger mills in the district are located on deep water with dock facilities capable of accommodating large vessels. Mills built in the timber or not located on deep water make use of the Port Terminal for assembling and shipping. The principal sawmill docks in the district are as follows:

Crossett-Western Lumber Company, Wauna, Oregon	Capacity 8-hour shift 200,000 feet B. M. Berthage space 1,000 feet. Located about 28 miles by ship channel from Astoria Port Terminal.
Knappton Mills and Lumber Company, Knappton, Washington	Capacity 8-hour shift 150,000 feet B. M. Berthage space 700 feet. Located about 6 miles from Astoria by river lines, but about 16 miles by ship channel.
Prouty Lumber and Box Company, Warrenton, Oregon	Capacity 8-hour shift 125,000 feet B. M. Berthage space 550 feet. Located about 3 miles by ship channel from Astoria Port Terminal.
Warrenton Lumber Company, Warrenton, Oregon	Capacity 8-hour shift 65,000 feet B. M. Berthage space 400 feet. Located about 3.5 miles by ship channel from Astoria Port Terminal.
Westport Lumber Company, Westport, Oregon	Capacity 8-hour shift 250,000 feet B. M. Berthage space 1,200 feet. Located about 30 miles by ship channel from Astoria Port Terminal.

ELECTRIC CARGO CRANES
AT PIER 3.

These roof type electric cargo cranes are used by several lines instead of ship's gear as both loading and discharging can be accomplished much faster than with winches. Another advantage is that two cranes can be worked in one hatch when necessary.

STEVEDORING

The Columbia River Stevedoring Company maintains a central hiring hall at 74-10th Street on the open shop plan from which longshoremen are employed and dispatched to all docks and mills in the district from the mouth of the river to Westport.

The Astoria Stevedoring Company is the only stevedoring company with headquarters in Astoria and does a considerable part of the stevedoring work in the district. They are supplied with modern and ample equipment to handle all classes of this work.

Many steamship operating companies contract all stevedoring on the Columbia and Willamette Rivers with one stevedoring firm. All such firms have access to the supply of labor furnished through the central employment agency.

STEAMSHIP AGENTS AND CUSTOMS BROKERS

The following experienced and reliable concerns represent the principal lines calling in this district:

Astoria Shipping Company, Inc., Port Terminal.
Boelling and Company, 56-10th Street.
Cherry and Company, 56-10th Street.
G. W. Sanborn & Sons, 30-9th Street.

BUNKERING

The Standard Oil Company leases a site at the Port of Astoria Terminal and is equipped to fuel vessels at three berths at Pier Two. This plant has a storage capacity for 85,000 barrels of fuel oil and 5,000 barrels of diesel oil. Fuel oil can be supplied at rate of 2,100 barrels per hour and diesel oil at 300 barrels per hour. This company also has a plant and wharf at the foot of 5th Street used mainly for local gasoline and oil distribution but can supply fuel or diesel oil to ships from this plant when necessary.

The Union Oil Company plant and wharf are located at the west end of Astor Street. This plant has a storage capacity of 14,000 barrels of fuel oil, besides storage for diesel oil and gasoline and supplies fuel oil from two pumps each having a capacity of 600 barrels per hour.

The Shell Company and General Petroleum Corporation are operating plants on leased sites at the Port Terminal. At present these companies are handling only gasoline and light oils but eventually expect to have bunkering facilities available.

Due to the predominant use of fuel oil and diesel oil there has been very little demand for bunker coal on the Columbia River for the past several years. Pier Two of the Port of Astoria Terminal is well adapted for handling bunker coal, having ample storage space and equipped with three locomotive cranes for discharging or loading. Any of the firms dealing in bunker coal will quote prices delivered to ship at the Port Terminal. The Sanborn Dock is also equipped to handle coal to or from open storage, effecting delivery with a stationary electric derrick.

REPAIR FACILITIES

There are several fully equipped marine repair plants and machine shops serving the large fishing and towing fleets totaling several thousand boats. These plants bid on and are equipped to complete repair work on larger vessels when drydocking is not necessary. The drydock and marine ways available at Astoria are not capable of accommodating large vessels.

The principal marine repair companies are as follows:

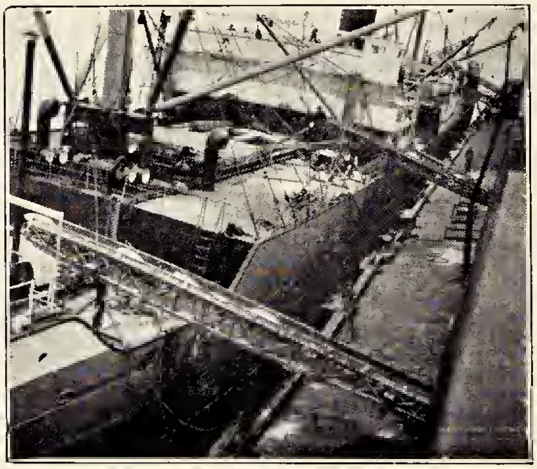
Astoria Shipbuilding Company, Lewis and Clark.
Columbia Iron and Steel Works, Port of Astoria Terminal.
Pacific Machine and Blacksmith Company, Foot of 14th Street.
Wilson Shipbuilding Company, Smith's Point.

SHIP CHANDLERS

All items in this line can be procured from the various firms carrying a complete stock to supply the needs of the large fleet of small craft operating out of Astoria.

Principal suppliers are as follows:

Astoria Hardware Company, 546 Commercial Street.
Astoria Marine Supply Company, 567 Bond Street.
Beebe-Ullfers Company, 587 Bond Street.
Fisher Brothers Company, 552 Bond Street.
McLin Hardware Company, 567 Commercial Street.
Oregon Marine and Fisheries Supply Company, 472 Bond Street.
A. Puusti & Company, 274 Taylor Avenue.



PORTABLE ELECTRIC CARGO CONVEYORS AT PIER 1

These 60 foot conveyors are used in loading sacked cargo and will handle to ship up to 100 tons per hour each, depending upon how fast cargo can be stowed.

SALVAGE

The U. S. Coast Guard cutter "Algonquin" is stationed at Astoria, except during a short summer cruise to Alaska, and is available for rendering assistance to vessels off the Oregon and Washington coasts.

The equipment of private companies available at Astoria is especially well suited for river salvage work and can operate on outside jobs to some extent. The Columbia River Salvage Company operates with the floating equipment of diesel tugs and lighters of the Arrow Tug and Barge Company. In addition to the pumping equipment of the tugs, this company has extra salvage and fire pumps with a capacity of two tons per minute. They also operate an extra heavy hoisting and pulling engine on a 400 ton barge and have a complete supply of heavy cable, chain, blocks, anchors, etc. Competent and experienced divers are employed. The Knappton Towboat Company's equipment of 13 tugs, several lighters and a derrick barge are available for river salvage work. In addition to the pumps and other equipment on the tugs, extra pumps and other salvage material are on hand and available.

There are two U. S. Life Saving Stations near the mouth of the river, Point Adams Station on the south side and Cape Disappointment Station on the north side.

COMMUNICATIONS

Foreign or ship messages filed with either Postal Telegraph or Western Union Telegraph offices will be forwarded via their respective cable or radio connections through quickest possible route. Local and long distance telephone service are provided by the Pacific Telephone and Telegraph Company and special long distance telephone service by the Postal Telegraph Company. Vessels berthing at the Port Terminal are provided with telephones placed on board by the Port at no expense to the ship except for long distance service.

STEAMSHIP LINES

The Lower Columbia River is served by 48 lines operating vessels to and from the principal world ports. Many of the lines shown below call in the district regularly and others whenever cargo is offering.

Coastwise Lines

Admiral Line (Pacific Steamship Co.)
McCormick Line.
Nelson Line.
Several of the large California lumber distributors operate their own vessels carrying lumber from the Columbia River to California.

Intercoastal Lines

American-Hawaiian Steamship Co.
Argonaut Steamship Line.
Arrow Line.
California and Eastern S. S. Co.
Isthmian Steamship Lines.
Luckenbach Steamship Co.
Munson-McCormick Line.
Quaker Line.
Transmarine Line.

Gulf Lines

Gulf Pacific Line.
Luckenbach Steamship Co.
Transmarine Line.

Europe

(Lines marked * call at Central American ports enroute).
Ben Line (British).
Blue Star Line (British).
*East Asiatic Co. Ltd. (Danish).
Ellerman and Bucknall S. S. Co. Ltd. (British).
*French Line (Compagnie Generale Transatlantique-French).
Furness Line (British).
Harrison Direct Line (British).
*Johnson Line (Swedish).
Navigazione Libera Triestina, S. A. (Italian).
*North Pacific Coast Line—Joint service of The Royal Mail Steam Packet Co. (British) and Holland-America Line (Dutch).
*Norway-Pacific Line (Norwegian).
United American Lines—Joint service of American Ship and Commerce Corp. (American) Hamburg-American, Kosmos and Roland Lines (German).

South America-West Coast

Grace Line (American).
Latin-America Line (Norwegian) also calls Central American ports.
Winge & Co. (Norwegian).

South America-East Coast

Pacific-Argentine-Brazil Line (American).
Westfal-Larson Line (Norwegian).

West Indies

Munson-McCormick Line (American).
Svea Steamship Co. (Swedish).

Mexico-East Coast

Gulf Pacific Line.

Orient

Kawasaki Line (Japanese).
Mitsui & Co. Ltd. (Japanese).
Nippon Yusen Kaisha (Japanese).
Ocean Transport Co. (Japanese).
Oregon Oriental Line (American).
Suzuki & Co. Ltd. (Japanese).
Tatsuma S. S. Co. (Japanese).
Yamashita Co. (Japanese).

Australia

American Australia Orient Line (American).
Australian Dispatch Line (Various flags).
Transatlantic Steamship Co. Ltd. (Swedish).

Hawaiian Islands

Matson Navigation Co.

RAIL AND RIVER LINES

Railroad service is provided by the Spokane, Portland and Seattle Railway Company, owned jointly by the Great Northern and Northern Pacific systems. When the merger plans of these lines are perfected this will be an important part of the main system. Transcontinental import and export rates apply to and from Astoria and the port is on a parity with other northwest ports on traffic to and from a large part of the Northwestern Inland Empire. There are a number of short lines built into the timber, some of which are common carriers. The Port of Astoria owns a belt line railroad right-of-way extending about 15 miles along the Astoria waterfront and Youngs Bay, 3 miles now being in operation, thus assuring railroad facilities for present industries and future industrial development.

The Harkins Transportation Company operates a fleet of river steamboats between Portland and Astoria. Through rates in connection with the Union Pacific system apply via this line. This company is now building two large modern diesel propelled freight and passenger boats for their river service.

There is a large and important river traffic in freight and passengers carried on by concerns operating steam and diesel craft and barges, many on regular schedule and others on contract or charter.

FOREIGN AND DOMESTIC COMMERCE

Following figures showing total outbound and inbound tonnage of the Port of Astoria district between Westport and sea are compiled from records of the movement over public and private docks and from custom house statistics.

OUTBOUND TONNAGE—SHORT TONS

	Foreign	Intercoastal	Coastwise	Total
1926	253,087	55,536	148,991	457,614
1925	178,629	44,471	211,467	434,567

INBOUND TONNAGE—SHORT TONS

	Foreign	Intercoastal	Coastwise	Total
1926	13,210	655	62,720	76,135
1925	22,470	503	72,603	95,576

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AIRPLANE VIEW OF
WARRENTON, OREGON

Site of mills and docks of Prouty Lumber and Box Co. and Warrenton Lumber Co.

LUMBER SHIPMENTS

Following figures illustrate the world wide distribution of lumber shipped from the Lower Columbia River. These figures cover shipments by vessel from all mills and docks in the Astoria Customs district, including the Port of Astoria district.

DESTINATION	1925 Feet B. M.	1926 Feet B. M.
California	198,157,222	163,217,164
Atlantic Coast and Gulf Ports	39,686,659	51,877,503
Mexico	830,000	
Cuba	1,257,500	2,855,340
South America	10,537,902	3,273,500
United Kingdom	8,082,188	2,863,654
Europe	776,042	3,810,408
Japan	31,882,971	67,986,190
China	26,453,000	36,441,975
India	3,777,000	
Phillipines	127,000	
Australia and New Zealand	44,679,000	48,008,692
Hawaiian Islands	6,547,307	7,262,200
	372,794,281	387,596,626

GOVERNMENT AND MUNICIPAL AGENCIES RELATING TO SHIPPING

U. S. GOVERNMENT

U. S. Customs — Post Office Building — *R. D. Lamb,* Deputy Collector.

U. S. Public Health Service — Spexarth Building — *Dr. M. K. Gwynn,* Surgeon-in-charge.

U. S. Immigration Bureau — Spexarth Building — *E. A. Dueber,* Inspector-in-charge.

U. S. Horticultural Board — Spexarth Building — *Harry Sargent,* Inspector-in-charge.

U. S. Department of Justice — 515 Commercial St. — *H. K. Zimmerman,* U. S. Commissoner.

U. S. Lighthouse Service — Tongue Point Depot — *J. M. Coleman,* Keeper-in-charge.

U. S. S. MANZANITA—*Capt. A. A. Modeer.*

U. S. S. ROSE — *Capt. O. Erickson.*

U. S. Coast Guard — S. S. ALGONQUIN—*Lieut. Commander G. L. Howell,* Commanding Officer.

Point Adams Life Saving Station—*Capt. O. S. Wicklund.*

U. S. War Department — Fort Stevens — *Capt. E. R. Percy,* Commanding Officer.

U. S. Navy Department — Youngs Bay Radio Station— *E. Hoel,* Chief Radio man.

PORT OF ASTORIA—Offices at Port Terminals.

Port Commission: *President, B. F. Stone.*
Vice-President, *W. P. O'Brien.*
Secretary, *L. L. Paget.*
Treasurer, *W. A. Tyler.*
Commissioner, *A. G. Spexarth.*
Operating Staff: Manager and Chief Engineer, *R. R. Bartlett.*
Traffic Manager, *W. H. Nelson.*
Agent, *L. B. Ryan.*
Dock Superintendent, *G. W. Walters.*
Harbor Master, *Capt. F. M. Sweet.*

CITY GOVERNMENT—City Hall, 16th and Exchange Streets.

Mayor, *J. C. Ten Brook.*
Commissioners: *J. R. Arnold.*
E. G. Gearhart.
Victor Seaborg.
Lloyd Van Dusen.
City Manager, *O. A. Kratz.*
Chief of Police, *C. A. Murphey.*
Chief of Fire Dept., *E. N. Bussing.*

ASTORIA CHAMBER OF COMMERCE,—190 14th Street.

President, *A. W. Norblad.*
Secretary, *Leo R. Merrick.*

DISCHARGING LOGS AND LUMBER AT PORT TERMINAL

Locomotive cranes are used for unloading cars, barges or vessels and for delivering lumber and logs from storage to ship's tackle at Pier 2, Port of Astoria Terminal.